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## INTERNATIONAL SEARCH REPORT

Intern      I Application No  
PCT/IB2004/050082A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7    G06J1/00    G11B7/09

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7    G06J    H03M    G11B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 501 570 A (PHILIPS NV) 2 September 1992 (1992-09-02) cited in the application column 6, line 30 - line 33 column 7, line 8 - column 8, line 6; figures 1,2a,10	1,8
A	US 5 187 482 A (GARVERICK STEVEN L ET AL) 16 February 1993 (1993-02-16) abstract; figure 3	1,8

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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# INTERNATIONAL SEARCH REPORT

Inter

I Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0501570	A	02-09-1992	DE 69216441 D1	20-02-1997
			DE 69216441 T2	10-07-1997
			EP 0501570 A1	02-09-1992
			JP 3273804 B2	15-04-2002
			JP 5073102 A	26-03-1993
			KR 224513 B1	15-10-1999
			US 5249116 A	28-09-1993
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US 5187482	A	16-02-1993	NONE	
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